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## PRACTICAL POINTS IN THE TREATMENT OF SOME COMMON DISEASES OF THE EYE.\*

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IN THE WESTERN PENNSYLVANIA MEDICAL COLLEGE, PITTSBURGH.

THE conventional ten years that I devoted to the general practice of medicine before limiting my work impressed me very forcibly that there was a wide difference between the theory and the practice of medicine.

Seven years have elapsed since one of my preceptors remarked to me that "it required five years to become informed in ophthalmology." Experience has taught me that five years is too short a time. When we cease to be students we should be placed on the retired list.

The points that I present on some of the diseases involving the conjunctiva are not new, but I trust that they are practical.

Inflammation of the margins of the eyelids, termed blepharitis, is most common in persons of feeble constitution; scrofulous children are especially subject to this af-

\* Read before the Colorado State Medical Society, June 21, 1892.

fection. Eye-strain is one of the exciting causes, especially in persons having errors of refraction. It is frequently a sequela of measles. The treatment varies with the constitution of the patient and the exciting cause. First, place the digestive organs in as good a condition as possible. The food must be plain, nourishing, and taken at regular intervals, and the body cleansed frequently.

Pure air and frequent bathing are as essential to success in the treatment of subacute and chronic diseases of the eye as in diseases of other portions of the body.

Errors of refraction must be corrected to prevent relapses. Any crusts adhering to the margins of the lids or stunted cilia should be removed. If ulcers are found beneath the crusts, they should be touched lightly with tincture of iodine or carbolic acid, the application to be preceded with a ten-per-cent. solution of cocaine and followed by an oil.

An ointment of the yellow oxide of mercury is an excellent local remedy. Most authors direct that the ointment contain from eight to twenty-four grains of the mercury to the ounce. I believe the ointment thus made is too strong and acts as an irritant. An ointment containing but half a grain to two grains to the ounce is sufficiently strong. The base of these ointments is mostly of petrolatum. I have observed that with some persons any of the forms of petroleum act as an irritant. For such patients mutton tallow or lanolin is the best substitute for petrolatum.

The iodide of thymol, otherwise known as aristol, applied dry or in the form of an ointment, is an excellent local remedy in cases with ulcers beneath the crusts.

Internally the iodide of iron, in the form of syrup, has been my preference in the delicate and scrofulous.

One of the common affections of the eyes, involving the conjunctiva of the ball and frequently the epithelial



covering of the cornea, is phlyctenular conjunctivitis. It is characterized by one or more small blisters filled with serum and surrounded by injected blood-vessels; the blister breaking down, it is converted into an ulcer. The subjects of this disease, as with the one just referred to, are usually delicate and of a strumous habit. The disease manifests itself most frequently during the first dentition and at puberty.

In many of the patients, and especially in children, we find an excess of catarrhal secretion from the nasal mucous membrane. I have experienced difficulty in treating some of this class successfully. There is invariably an unhealthy state of the digestive organs, brought about by irregular meals, sweetmeats, and pastry. The food should be plain, wholesome, and partaken of at regular intervals. Calomel, in one-tenth-grain doses three or four times daily, meets the indications in many of these patients. Where the stomach would bear it, I have for most of my patients prescribed iron in the form of iodide, and in delicate, scrofulous children it has been my habit to prescribe pure cod-liver oil, to be administered by inunction two or three times daily.

Locally, the application of water as warm as can be borne, for ten minutes four or five times daily, assists in the relief of the congestion and pain. For several years it has been my custom to add five grains of chlorate of potassium to the ounce of warm water, directing that it be applied with a dropper or fountain syringe directly into the ulcers. I am satisfied that the ulcers heal more rapidly with the chlorate solution than with the water alone. Atropine is indicated in some cases to put the accommodation at rest. One grain of ointment of the yellow oxide of mercury, applied once daily, will assist in healing the ulcers. The iodide of thymol is quite as valuable in ulcers of the conjunctiva and cornea as in blepharitis.

While the local treatment in phlyctenular cases is very necessary, the constitutional treatment, with the proper food, is quite as important.

I have seen thin, anæmic children improve wonderfully in one week on the mild chloride of mercury internally, with cod-liver oil by inunction.

Acute catarrhal conjunctivitis will, in many cases, get well without any treatment. Locally, the use of a mild astringent, such as a ten-grain solution of boric acid, or a half-grain solution of nitrate of silver, applied three or four times daily, will assist Nature materially. The eyes should be shaded, but not bandaged. Internally, whatever is indicated by the state of the system. The nasal mucous membrane should always be examined and treated if needed.

Subacute catarrhal conjunctivitis may be excited by an affection of the lacrymal apparatus, in which case it is termed lacrymal conjunctivitis, or by nasal catarrh, or by eye-strain in cases with anomalies of refraction. As the latter exist in from seventy-five to ninety per cent. of the civilized race, it is an important causative factor.

Catarrhal disease of the respiratory passages is very common, especially in the climate of Colorado.

The membrane lining the lacrymal sac and the nasal duct being continuous, we can readily understand why nasal catarrh is frequently a cause of conjunctivitis.

The treatment must vary with the cause and complications.

Partial stenosis of the nasal duct, if due to a swollen condition of its lining membrane, can be relieved by suitable astringents, such as a half-grain to a grain solution of the iodide or the chloride of zinc, and, when necessary, a probe must be used. Any errors of refraction should be corrected by the proper adjustment of glasses.

In acute dacryocystitis there is but one indication, and that to subdue the inflammation as rapidly as possible. If pus has formed, it should be evacuated early, saving the sac and avoiding, if possible, a fistula.

In the treatment of chronic dacryocystitis the inexperienced might be at a loss to know which of the various methods, as given in our text-books, he should follow. One able eye surgeon will advocate one method, while another of equal ability will condemn it.

In most cases the stenosis is due to inflammation and catarrhal changes of the upper portion of the nasal duct. When the stricture is soft, the astringents already mentioned may be of service. In this affection, a 1-to-1,000 to 1-to-500 solution of pyoctanin is of value as a germicide. When the lining of the duct is hypertrophied and firm, a probe will be necessary. I do not believe that the canaliculi should be sacrificed in every case of stricture of the duct, for, when the canal has been slit and a probe passed daily for several days, the function of the canal is destroyed. My attention was called to this point by Dr. Born, of New York, Dr. Knapp's chief assistant. It is possible to pass a No. 5 Bowman's probe in some cases by simply cutting through the puncta. Some of our eye surgeons practice the slitting of a canaliculus and stricture with the knife, following it with the large probes of Theobald, not hesitating to use the No. 16, which is 4 mm. in diameter.

The advocates of this method of treatment allege for it rapid cures. My experience with it would not warrant me in praising it or condemning it, except to state that the study of the anatomy of the bony canal will convince any one that but a very small percentage of the skulls will permit of the larger probes being passed without fracture of the bony walls of the canal.



In an excellent and timely article by Dr. G. M. Gould, of Philadelphia, the following statement by Dr. S. D. Risley is quoted: "That, in examination of a number of dry skulls, he found none the lacrymal ducts of which admitted the passage of the large probes advised for probing the living, membrane-lined, and therefore narrowed canal." \*

However, the most sensible treatment of tight strictures is to slit them freely with the Agnew knife or its equal; then keep the canal open with probes as large as the canal will admit of without fracture of the bone.

Trachoma or granular ophthalmia has for ages been one of the dreaded diseases that involved the conjunctiva. And not to the sufferer alone, but also to the physician. Until within the past few years the treatment has been anything but satisfactory.

During the acute stage of trachoma, as with all acute purulent and muco-purulent affections of the conjunctiva, the treatment should be to keep the surfaces clean, the inflammation subdued, and the parts lubricated. The cleansing may be done with a mild solution of boric acid, or of the bichloride of mercury, the latter not stronger than 1 to 4,000. Strong applications, such as ten-grain to twenty-grain solutions of nitrate of silver, should not be used in this stage, as they intensify the inflammation and increase the pain. Cold or hot water compresses, applied for fifteen to twenty minutes every half-hour, help to relieve the congestion and pain. Where there is much tumefaction of the conjunctiva, it should be depleted by scarification, and the inflamed tissues should be kept lubricated with white petrolatum or its equal.

The correct principle upon which to treat acute oph-

\* *New York Medical Journal*, June 4, 1892.



thalmia has been concisely presented by Dr. Wolfner, of St. Louis.\*

In the treatment of trachoma our object should be to restore the tissues to a healthy condition in the shortest time possible, without permanent injury to the normal structures.

The judicious use of the mitigated stick of silver or the crystal of sulphate of copper will certainly cure many cases of granular ophthalmia in from three to six months. One objectionable feature of this treatment has been that the patient tires ere he has recovered, and either changes his physician or, for various reasons, neglects the treatment altogether.

During the past decade a variety of mechanical methods of treatment have been introduced, some of which are excellent; others, while effectual in curing the disease, have been condemned on account of the destruction of normal tissues.

After a perusal of the writings of eminent eye surgeons on the treatment of trachoma, the inexperienced would be in doubt as to whose method to adopt. There exists such an independent disposition among the leading eye surgeons—as with all practitioners—that they are slow to adopt a brother practitioner's method or instrument, but will improve (?) upon it, or offer a different method. Consequently we have a variety of methods and means.

The method of treating trachoma by compression, or squeezing of the granulations, has been advocated by Dr. Hotz,† of Chicago, Dr. Noyes‡ and Dr. Knapp,\* of New York, and others. The three named differ only in the instruments used.

\* *Annals of Oph. and Otol.*, vol. i, p. 29.

† *Archives of Ophthal.*, vol. xv, p. 147.

‡ *Text-book on Dis. of the Eye*, 1890, p. 321.

\* *Archives of Ophthal.*, vol. xxi, p. 119.

Dr. Hotz uses his thumb-nail for the upper lids and a toothless, curved forceps for the lower lids. Dr. Noyes uses curved, grooved-bladed forceps of his own device. Dr. Knapp, after trial with other instruments on the market, devised a forceps that is called the roller forceps for trachoma. While, by the old method previously alluded to, we consumed months in the treatment of trachomatous cases, under compression the patients are well in a few weeks; one operation is usually all that is needed to effect a cure.

Of the various mechanical methods of treatment, that by the roller forceps is to me the best; the instrument is easily handled, does the work quickly, and causes less bleeding and destruction of the conjunctiva than any other instrument with which I am familiar.

My experience with the roller forceps, while limited, has been highly satisfactory. The one I have here differs from the one illustrated in the *Archives*, having been improved by Dr. Knapp.

As to the mode of application, I can not do better than to give you Dr. Knapp's instructions, as recorded in the *Archives*, viz.: "The patient is etherized, except in mild cases of superficial granular deposition, in which cocaine anæsthesia penetrates deeply enough to perform the operation without pain. The upper lid is everted, seized at the convex border of the tarsus with an ordinary forceps, and drawn off the eye, so as to expose the whole palpebro-bulbar conjunctiva. The infiltrated part is then, or is not, superficially scarified with the three-bladed 'sillonneur' of Johnson. One blade of the forceps is pushed deeply between the ocular and palpebral conjunctiva, the other applied to the everted surface of the tarsus. The forceps is compressed with more or less force downward, and the infiltrated soft substances squeezed out as the cylinders roll over the surface of the fold held between them. This manœuvre is

repeated all over the conjunctiva until the granules and the juice are completely pressed out of the tissue. The forceps passes two or three times over the same place until the absence of resistance proves that all the foreign tissue substance is removed. The lower lid is treated in the same way, only it is not necessary to use fixing forceps." All of the granulations are to be squeezed. The subsequent dressing consists of cold compresses for twenty-four hours, and cleansing the tissue with 1-to-5,000 bichloride solution.

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